



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,333	10/03/2000	Mikio Watanabe	0879-0281P	4816

7590

06/05/2006

BIRCH, STEWART, KOLASCH & BIRCH, LLP  
P. O. Box 747  
Falls Church, VA 22040-0747

EXAMINER

AGGARWAL, YOGESH K

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



***Response to Arguments***

1. Applicant's arguments filed 02/27/2006 have been fully considered but they are not persuasive.

**Examiner's response:**

2. Applicant argues that the elements of slave and master side are being combined together to teach elements of the one information device of the present application. The Examiner disagrees. Kiyokawa teaches that the camera on the slave side transmits an image to the master side in step S51 (figure 8), and the camera on the master side receives the image data in step S41 (col. 9 lines 21-24). At step S42, the system controller 20 checks whether the trigger switch 45 is depressed (instruction to capture an image) and if the trigger switch is depressed, a transmission stop command to the slave side to stop the image transmission is generated (col. 9 lines 25-39). Kiyokawa teaches that the reason for stopping the transmission from the slave side to the master side is so that the master side does not lose a shutter chance and a photographing operation is preferentially performed (col. 9 lines 47-54). Therefore it is noted that in order to perform a photographing operation preferentially the master camera stops receiving the images and thus would be obvious to one skilled in the art that it would also not perform transmitting operation from the data input/output section during that time. Hence the master camera is being read as the information-recording device for the purposes of the claim.

3. In response to applicant's argument that Katsuhiro is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d

Art Unit: 2622

1443, 24 USPQZd 1443 (Fed. Cir. 1992). In this case, the Katsuhiro reference is reasonably pertinent to the problem of reducing the power consumption and also noise due to a dark current of a clock oscillator signal by stopping the clock signal for an oscillation circuit when there is no signal to transmit. Kiyokawa's stopping the transmission from the slave side to the master side is so that the master side does not lose a shutter chance and a photographing operation is preferentially performed (col. 9 lines 47-54). Therefore master side camera would not perform the function of transmitting the images. Hence using Katsuhiro's reference to teach reducing power as well as noise when there is no input signal is analogous.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 7-9, 13, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyokawa (US Patent # 6,204,877), Katsuhiro (JP Patent # 04098996) and further in view of Pine (US Patent # 6,714,260).

[Claim 1]

Kiyokawa teaches an information-recording device (figures 2-4 and 8) comprising a recorder (IC card 19) for recording images, a communication device (data input/output section 23) for transmitting image information to external equipment, a controller (system controller 20) for controlling the communication section (23) with an external unit through a data bus B2 (col. 5 lines 4-7). Kiyokawa further teaches a camera on the slave side transmitting an image to the

Art Unit: 2622

master side in step S51 (figure 8), and the camera on the master side receiving the image data in step S41 (col. 9 lines 21-24). At step S42, the system controller 20 checks whether the trigger switch 45 is depressed (instruction to capture an image) and if the trigger switch is depressed, a transmission stop command to the slave side to stop the image transmission is generated (col. 9 lines 25-39). Kiyokawa teaches that the reason for stopping the transmission from the slave side to the master side is so that the master side does not lose a shutter chance and a photographing operation is preferentially performed (col. 9 lines 47-54). Therefore it is noted that in order to perform a photographing operation preferentially the master camera stops receiving the images and thus would be obvious to one skilled in the art that it would also not perform transmitting operation from the data input/output section during that time.

Kiyokawa teaches that during the time image is being taken an image receiving or transmitting operation does not take place but fails to teach an oscillation section that stops the pausing of the carrier frequency when the image is being captured by the information recording device.

However Katsuhiko teaches stopping the output of a clock signal for an oscillation circuit when there is no change in an input signal to an external device or a transmission line and starting the output of the clock signal when there is any change in order to reduce the power consumption due to a dark current (Abstract).

Therefore taking the combined teachings of Kiyokawa and Katsuhiko, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have stopped the output of a clock signal for an oscillation circuit when there is no change in an input

Art Unit: 2622

signal to an external device during the image taking of Kiyokawa in order to reduce the power consumption due to a dark current as taught in Katsuhiro.

Kiyokawa in view of Katsuhiro fails to teach a carrier generating section for generating a carrier for a wireless communication device. However Pine '260 teaches an imager circuit 15 having a master clock frequency oscillator 17 generating a desired carrier frequency for a radio transmission of the composite video signal for transmitting wirelessly (Col. 1 lines 66-67, col. 2 lines 1-7 figure 1, Abstract).

Therefore taking the combined teaching of Kiyokawa, Katsuhiro and Pine, it would have been obvious to one skilled in the art at the time of the invention to have been motivated to incorporate an oscillation section for generating a carrier for said wireless communication device taught in Pine into the system taught in Kiyokawa and Katsuhiro in order to pick a radio frequency signal by a conventional TV receiver, which can be synthesized on-chip to provide a wireless video link as taught in Pine (Abstract).

[Claim 2]

In the combination of references, Kiyokawa teaches to start transmitting the image after the images are recorded in the slave camera (col. 9 lines 40-54) and Katsuhiro teaches starting the oscillation section when the signal for transmission is present (Abstract).

[Claims 3 and 7]

Regarding claims 3 and 7 these are method claims corresponding to apparatus claim 1 and 2 respectively. Therefore, claims 3 and 7 are analyzed and rejected as previously discussed with respect to claim 1 and 2.

[Claim 4]

Art Unit: 2622

Kiyokawa teaches a transmit image data transmission stop command from the master side to the slave side indication that the transmission of images is to be stopped. Katsuhiro teaches stopping the output of a clock signal for an oscillation circuit when there is no change in an input signal to an external device (Abstract).

[Claim 8]

Kiyokawa further teaches to start transmitting the image after the images are recorded in the slave camera (col. 9 lines 40-54). Kiyokawa also teaches that the steps of transmitting image and control data may be performed manually or automatically according to a control program (col. 3 lines 40-50). Katsuhiro teaches starting the oscillation section when the signal for transmission is present (Abstract).

[Claim 9]

See Examiner's rejection regarding claim 1.

[Claim 13]

Katsuhiro teaches stopping the output of a clock signal for an oscillation circuit when there is no change in an input signal to an external device or a transmission line (Abstract) and Pine teaches a master clock frequency oscillator 17 generating a desired carrier frequency for a radio transmission of the composite video signal for transmitting wirelessly (Col. 1 lines 66-67, col. 2 lines 1-7 figure 1, Abstract). Therefore in the combination of references, a carrier generating section is paused by pausing a carrier oscillation section.

[Claim 14]

Pine teaches a multiplier 21 that generates a composite video signal based on the clock frequency set by the composite video signal (col. 2 lines 1-10).

Art Unit: 2622

[Claim 16]

Katsuhiro teaches starting the clock signal when there is an input signal present that is to be transmitted to an external device.

[Claim 17]

Katsuhiro teaches stopping the output of a clock signal for an oscillation circuit when there is no change in an input signal to an external device or a transmission line (Abstract) and Pine teaches a master clock frequency oscillator 17 generating a desired carrier frequency for a radio transmission of the composite video signal for transmitting wirelessly (Col. 1 lines 66-67, col. 2 lines 1-7 figure 1, Abstract). Radio frequencies are in the range of upwardly from 150Khz-Mhz. Therefore in the combination of references, Katsuhiro teaches stopping the clock and Pine teaches a RF-carrier frequency being generated from a clock oscillator. It would be obvious to one skilled in the art that by stopping the high frequency RF signal, the noise due to that will be reduced.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyokawa (US Patent # 6,204,877) in view of Katsuhiro (JP Patent # 04098996), Pine (US Patent # 6,714,260) and in further view of Yokota et al. (US Patent # 5,847,662).

[Claim 6]

Kiyokawa, Katsuhiro and Pine fail to teach, "... the step of receiving a synchronization signal emitted by external equipment while the generation of said carrier is stopped". However these limitations are well known in the art as evidenced by Yokota (col. 2 lines 6-10)[Yokota teaches that the signal received from the radio card is phase-synchronous (synchronization signal) with the first carrier frequency and while that signal is received the generation of the first carrier is



Art Unit: 2622

stopped (col. 1 lines 46-65)]. Therefore taking the combined teachings of Kiyokawa, Katsuhiro Pine and Yokota as a whole, it would have been obvious to one skilled in the art at the time of the invention to incorporate receiving a synchronization signal emitted by an external equipment while the generation of said carrier is stopped as taught in Yokota into the system of Kiyokawa in view of Katsuhiro in order to have synchronization between the camera and the external equipment even after the transmission of the carrier is stopped.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyokawa (US Patent # 6,204,877) in view of Katsuhiro (JP Patent # 04098996), Pine (US Patent # 6,714,260) and in further view of Yoshizawa et al. (US Patent # 4,802,201).

[Claim 5]

Kiyokawa in view of Katsuhiro and Pine teach the limitations of claim 4 but fails to teach “.... causing any external equipment to transmit equipment identification information to another equipment for stopping a carrier; and causing said equipment for stopping a carrier to stop the generation of said carrier when it receives said equipment identification information”. However these limitations are well known in the art as evidenced by Yoshizawa (Abstract). It is noted that Yoshizawa specifically teaches that when a carrier wave is received from an external equipment and when the identification information contained in that carrier wave coincides with a preassigned identification signal, transmission of a paging signal, which would involve some kind of carrier, is stopped (Abstract). Therefore taking the combined teachings of Kiyokawa, Katsuhiro, Pine and Yoshizawa as a whole, it would have been obvious to one skilled in the art to modify the external equipment by transmitting equipment identification information to another equipment for stopping a carrier and causing said equipment for stopping a carrier to stop the

Art Unit: 2622

generation of said carrier when it receives said equipment identification information. Doing so would lead to a power saving type apparatus as taught in Yoshizawa (col. 2 lines 46-49).

8. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyokawa (US Patent # 6,204,877), Katsuhiro (JP Patent # 04098996), Pine (US Patent # 6,714,260) and in further view of Yokota et al. (US Patent # 5,847,662).

[Claim 10]

Kiyokawa in view of Katsuhiro and Pine teaches that the wireless oscillation is stopped during an imaging process but fails to teach, wherein, “while said wireless oscillation is stopped after the communication with desired external equipment has been established, said communication device is placed into semi-stop state where it can be synchronized with said external equipment for communication therewith by activating a receiving section.” However Yokota teaches that these limitations are well known and used in the art. It is noted that Yokota does teach in col. 2 lines 6-10, when the device receives the second carrier it stops transmitting the first carrier (col. 1 lines 40-45) and synchronizes with the first carrier frequency. The Examiner considers the semi-stop state as receiving a phase-synchronous signal from the external equipment. Therefore taking the combined teaching of Kiyokawa, Katsuhiro, Pine and Yokota it would have been obvious to one skilled in the art at the time of the invention to have been motivated to incorporate stopping said wireless oscillation after the communication with desired external equipment has been established and placing the communication device into semi-stop state where it can be synchronized with said external equipment for communication therewith by activating a receiving section. The benefit of doing so would be so that a communication

Art Unit: 2622

apparatus can continuously transmit or receive a vast amount of data at a time at a high speed without intermission as evidenced in Yokota (col. 1 lines 40-45).

[Claim 12]

In light of the teaching from Kiyokawa, Katsuhiro and Yokota, it would be obvious to those skilled in the art that the electronic camera would notify said external equipment that it will go into said semi-stop state and after stopping said semi-stop state, it would notify said external equipment that it has been released from said semi-stop state in order to have the external equipment be in a synchronization state with the camera. Yokota teaches that said external equipment keeps the connection therewith and supplies a synchronization signal in response to the notification of semi-stop state received from said electronic camera (Col. 2 lines 6-10).

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyokawa (US Patent # 6,204,877), Katsuhiro (JP Patent # 04098996), Yokota et al. (US Patent # 5,847,662), Pine (US Patent # 6,714,260) and in further view of Anderson (US Patent # 6,233,016).

[Claim 11]

Kiyokawa, Katsuhiro, Pine and Yokota fails to teach "... wherein said semi-stop state starts when the communication with desired external equipment is established, when its shutter release button is operated, when an imaging process starts, or when a power-saving operation starts and said semi-stop state ends when an imaging process is finished or when a predetermined operation starts to go into ordinary communication enable state. However Anderson teaches that these limitations are well known and used in the art. It is noted that Anderson, col. 7 lines 36-39, teaches a semi-stop state, wherein the semi-stop state is read as being started during a state when the power is in the Power-state 4 mode, during which a reduced power is supplied to the camera.

Art Unit: 2622

Further with regards to the limitation of said semi-stop state ends when an imaging process is finished or when a predetermined operation starts to go into ordinary communication enable state Anderson teaches that said semi-stop ends during the power-state 2 mode during which an imaging operation is finished (col. 7 lines 44-46). Therefore taking the combined teaching of Kiyokawa, Katsuhiro, Yokota, Pine and Anderson it would have been obvious to one skilled in the art at the time of the invention to have been motivated to start said semi-stop state when the communication with desired external equipment is established, when its shutter release button is operated, when an imaging process starts, or when a power-saving operation starts and to end said semi-stop state when an imaging process is finished or when a predetermined operation starts to go into ordinary communication enable state. The benefit of doing so would be to effectively and significantly increase the useful life of the batteries as taught in Anderson (col. 3 lines 51-53).

#### ***Allowable Subject Matter***

10. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach or suggest wherein the controller pauses only a carrier oscillation section of the carrier generating section while a clock oscillator of the carrier generating section is active.

#### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2622

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K. Aggarwal whose telephone number is (571) 272-7360. The examiner can normally be reached on M-F 9:00AM-5:30PM.


12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2622

YKA

May 26, 2006



DAVID OMETZ  
SUPERVISORY PATENT EXAMINER